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## RESEARCH

# An ominous shift to secrecy

Scientific research in the U. S. is headed toward tighter secrecy controls. Although free communication among researchers has long been the cornerstone of U. S. scientific and technological prowess, that same openness has unfortunately provided critical knowhow to American adversaries, both military and economic. Now the federal government is preparing to sacrifice some of that scientific freedom to keep U. S. technology from falling into the wrong hands.

University scientists were outraged last January when Admiral Bobby R. Inman, then deputy director of the Central Intelligence Agency, said that Washington planned to tighten controls over research unless the scientists helped it stanch the "hemorrhage of the country's technology" to the Soviet Union. A high-level study group has now conceded that some limits on unclassified but sensitive research may be necessary. "Recent trends have raised serious concerns that openness may harm U. S. security," says Frank Press, president of the National Academy of Sciences, which conducted the study.

Keeping the lid on this sensitive research, however, could not only damage the U. S. position in basic research, observers believe, but also hurt the competitive stature of U. S. industry. "Industry has a great deal of interaction with universities and professional societies," says Franklin A. Lindsay, chairman of the executive committee at Itel Corp. and a member of the National Academy panel. "If we bind our hands and feet in basic science at universities, the nation is going to suffer, and Itel's going to suffer. Basic research is the important part of the technology base which ought to be kept as free and open as possible." **Too easy access.** The push for new controls stems from many Reagan Administration officials, who believe that the Soviets have too easy access to U. S. secrets. Their fears were reinforced late last year by an interagency intelligence study of technology leakage. The study found that too little attention had been paid—even by intelligence experts themselves—to Russian acquisition of scientific and technical data, manufacturing processes, and finished products. Of particular concern was computer and laser technology that could make major contributions to Moscow's military and space efforts.

While many laws and regulations already exist for controlling the export of arms and other military hardware, some Administration officials want to extend them to cover scientific and technical information, as well. These officials would limit the visits of foreign scientists, ban foreign students from research on such projects as very-high-speed electronic circuits, and curb presentation of unclassified scientific papers that could disclose critical technology.

Not surprisingly, the academic community panicked when Inman and others began suggesting such controls. It called for an urgent study of the problem by university and industry scientists. After seven months of work, including top-level government intelligence briefings on the Soviet threat, the group announced its findings on Sept. 30.

**Things vs. information.** A quick reading of the report could give the impression that the universities were not part of the problem. The panel, headed by Dale R. Corson, president emeritus of Cornell University, reported no "concrete evidence" that campus research or unclassified scientific papers had contributed significantly to the leakage of important military knowledge to the Soviets. The panel also rejected the use of export laws and regulations to control information. Such laws, says Corson, were designed to control "things—packages and boxes that you could intercept," not scientific information.

The scientists did make some important concessions, however. They found "gray areas" between classified and unclassified research in which, they said, universities and industrial laboratories might need to accept curbs on open communications. While the panel members say they are determined to keep the flow of scientific information as free as possible, they recommended, surprisingly, that contracts or written agreements with the government may be necessary to deal with such sensitive areas of research. These agreements might include prior government review, although not veto power, over publication of research results. Since the government supports nearly all of this research, such a measure would give Washington a potent sanction over scientific publication.

In addition, the contracts could call for the exclusion of "nationals of designated foreign countries" from research studies, the scientists declared. They added that it would be "not inappropriate" if universities reported excluded foreign nationals to the government when they tried to participate in "gray area" research. "Some universities," the scientists suggested in an apparent understatement, "will regard such reporting requests as objectionable."

**Industry's role.** The capitulation of the academics has heightened industry's concern. Indeed, industry has been something of a Johnny-come-lately to the whole debate. "Frankly, the sensitivity to this issue in the industrial community is lagging behind that of the scientific community—but it is growing," says Roland W. Schmitt, General Electric Co.'s senior vice-president for research and development. Now industry would like to see an examination of its role in technology leakage. Adds Schmitt: "I think the problem in industry deserves the same quality of thought and consideration given by the Corson panel."

Both industry and universities agree that discussions of the problem are just beginning. If further controls are inevitable, it is urgent that government, industry, and academia sit down and discuss all the issues, argues Lewis M. Branscomb, vice-president and chief scientist of International Business Machines Corp. "It's a terribly difficult assignment to regulate knowledge," he says, adding: "It is better to regulate less if you can't regulate intelligently."

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